WHAT IS CLAIMED IS:

1. A data processing apparatus that can transmit a printing job to an image recording apparatus having a plurality of sheet discharge ports or an image

5   recording apparatus to which an optional device having a plurality of sheet discharge ports can be connected comprising:

registering means for instructing said image recording apparatus to register a discrimination name

10   for each of said sheet discharge ports respectively;

obtaining means for requesting to obtain a discrimination name of each sheet discharge port registered in said image recording apparatus from said image recording apparatus;

15   designating means for displaying the discrimination name obtained by said obtaining means, designating to select a plurality of sheet discharge addresses from the displayed discrimination name respectively by a predetermined unit of printing data

20   and, at the same time, designating the number of sheet discharge copies for each sheet discharge address designated by said predetermined unit of printing data; and

preparing means for preparing a printing job by

25   including each designation of the plurality of sheet discharge addresses by said predetermined unit of printing data by said designating means and each

designation of the number of sheet discharge copies of each sheet discharge address to be designated by said predetermined unit of printing data all in one printing job.

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2. A data processing apparatus according to Claim 1, wherein said registering means is for instructing said image recording apparatus to register a discrimination name for each of said sheet discharge

10 ports and the number of members belonging to the discrimination name respectively, said obtaining means is for obtaining a discrimination name registered in each sheet discharge port of said image recording apparatus and the number of members belonging to the

15 discrimination name from said image recording apparatus, and said designating means is for designating the number of members belonging to the discrimination name of the sheet discharge port obtained by said obtaining means or an arbitrary number

20 of copies in the number of sheet discharge copies of each sheet discharge address designated to be selected by said predetermined unit of printing data.

3. A data processing apparatus according to Claim

25 1, further comprising storing means for storing a plurality of character strings as discrimination names, wherein said registering means registers an inputted

character string or a character string selected from the plurality of character strings stored in said storing means as a discrimination name of a sheet discharge port in said image recording apparatus.

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4. A data processing apparatus according to Claim 1, wherein said predetermined unit of printing data includes a page unit of printing data.

10   5. A data processing apparatus according to Claim 1, wherein said printing data includes a plurality of printing data prepared by identical or different applications.

15   6. A data processing apparatus according to Claim 1, wherein reporting means for reporting information of a sheet discharge port to which a printing job is outputted that is notified at the time of finishing processing of the printing job from said image
20   recording apparatus.

7. A data processing apparatus that can transmit printing data to an image recording apparatus having a plurality of sheet discharge ports comprising:
25   obtaining means for obtaining a discrimination name registered in each sheet discharge port of said image recording apparatus;

designating means for displaying the discrimination name obtained by said obtaining means, designating to select a plurality of sheet discharge addresses from the displayed discrimination name

5 respectively by a predetermined unit of printing data and, at the same time, designating the number of sheet discharge copies for each sheet discharge address designated by said predetermined unit of printing data; and

10 preparing means for preparing a printing job by including each designation of the plurality of sheet discharge addresses by said predetermined unit of printing data by said designating means and each designation of the number of sheet discharge copies of

15 each sheet discharge address to be designated by said predetermined unit of printing data all in one printing job.

8. A data processing apparatus according to Claim

20 7, wherein said obtaining means is for obtaining a discrimination name registered in each sheet discharge port of said image recording apparatus and the number of members belonging to the discrimination name from said image recording apparatus, and said designating

25 means is for designating the number of members belonging to the discrimination name of the sheet discharge port obtained by said obtaining means or an

arbitrary number of copies in the number of sheet
discharge copies of each sheet discharge address
designated to be selected by said predetermined unit of
printing data.

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     9. A data processing apparatus according to Claim
8, wherein said discrimination name is information for
representing an owner using the sheet discharge port
including a user name, a group name and a department
10   name.

     10. An image recording apparatus that can
discharge a printing result of a printing job received
from a data processing apparatus to a plurality of
15   sheet discharge port comprising:
     registering means for registering a discrimination
name of each of said sheet discharge port that is
instructed to be registered by said data processing
apparatus;
20   first notifying means for notifying said data
processing apparatus of the discrimination name of each
of said sheet discharge port registered by said
registering means in accordance with a request from
said data processing apparatus;
25   preparing means for preparing page information for
a plurality of discrimination names of a predetermined
unit of printing data included in one printing job by

said predetermined unit of printing data based on the notification of said first notifying means;

retrieving means for retrieving a sheet discharge port to which a discrimination name identical with a plurality of discrimination names of a predetermined unit of printing data included in said one printing job; and

controlling means for instructing the discharge of the number of sheet discharge copies for each sheet discharge port retrieved by said retrieving means and each sheet discharge address designated by said predetermined unit of printing data
with respect to each piece of page information prepared by said preparing means.

11. An image recording apparatus according to Claim 10, wherein said registering means is for registering a discrimination name of each of said sheet discharge ports instructed to be registered by said data processing apparatus and the number of members belonging to the discrimination name, and said first notifying means is for notifying said data processing apparatus of the discrimination name for each of said sheet discharge ports registered by said registering means and the number of members belonging to the discrimination name in accordance with a request from said data processing apparatus.

12. An image recording apparatus according to Claim 10, wherein said predetermined unit of printing data includes a page unit of printing data.

13. An image recording apparatus according to Claim 10, wherein said printing data includes a plurality of printing data prepared by identical or different applications.

14. An image recording apparatus according to Claim 10, further comprising:

storing means for storing the state of each of said sheet discharge ports to be observed by observing the state of each of said sheet discharge ports;

second notifying means for notifying said data processing apparatus of the state of an abnormal sheet discharge port if an abnormality in the state of each sheet discharge port stored in said storing means exists; and

third notifying means for notifying said data processing apparatus of information of the sheet discharge port to which said printing jot is outputted at the time of finishing processing of said printing job.

15. An image recording apparatus according to Claim 14, wherein said storing means stores a loading

status, a discrimination name, a using status and the like of each sheet discharge port for each sheet discharge port.

5   16.   An image recording apparatus according to Claim 10, wherein said plurality of sheet discharge ports include a plurality of sheet discharge ports provided in an image recording apparatus main body and a plurality of sheet discharge port provided in an

10   optional apparatus to be connected to an image recording apparatus main body.

      17. An image recording apparatus according to Claim 10, wherein said discrimination name is

15   information for representing an owner using the sheet discharge port including a user name, a group name and a department name.

      18.   A controlling method of a data processing

20   apparatus that can transmit a printing job to an image recording apparatus having a plurality of sheet discharge ports or an image recording apparatus to which an optional device having a plurality of sheet discharge ports can be connected comprising the steps

25   of:

      instructing said image recording apparatus to register a discrimination name for each of said sheet

discharge ports respectively;

requesting to obtain a discrimination name of each sheet discharge port registered in said image recording apparatus from said image recording apparatus;

5   displaying the discrimination name obtained by said obtaining means, designating to select a plurality of sheet discharge addresses from the displayed discrimination name respectively by a predetermined unit of printing data and, at the same time,

10   designating the number of sheet discharge copies for each sheet discharge address designated by said predetermined unit of printing data; and

preparing a printing job by including each designation of the plurality of sheet discharge

15   addresses by said predetermined unit of printing data by said designating means and each designation of the number of sheet discharge copies of each sheet discharge address to be designated by said predetermined unit of printing data all in one printing

20   job.

19. A controlling method of a data processing apparatus that can transmit printing data to an image recording apparatus having a plurality of sheet

25   discharge port comprising the steps of:

requesting to obtain a discrimination name registered in each sheet discharge port of said image

recording apparatus;

displaying the obtained discrimination name, designating to select a plurality of sheet discharge addresses from the displayed discrimination name

5 respectively by a predetermined unit of printing data and, at the same time, designating the number of sheet discharge copies for each sheet discharge address designated by said predetermined unit of printing data; and

10 preparing a printing job by including each designation of the plurality of sheet discharge addresses by said predetermined unit of printing data and each designation of the number of sheet discharge copies of each sheet discharge address to be designated

15 by said predetermined unit of printing data all in one printing job.

20. A controlling method of an image recording apparatus that can discharge a printing result of a

20 printing job received from a data processing apparatus to a plurality of sheet discharge ports comprising the steps of:

registering a discrimination name of each of said sheet discharge ports that is instructed to be

25 registered by said data processing apparatus;

notifying said data processing apparatus of the registered discrimination name of each of said sheet

discharge ports in accordance with a request from said data processing apparatus;

preparing page information for a plurality of discrimination names of a predetermined unit of

5 printing data included in one printing job by said predetermined unit of printing data based on the notification;

retrieving a sheet discharge port to which a discrimination name identical with a plurality of

10 discrimination names of a predetermined unit of printing data included in said one printing job is registered; and

instructing the discharge of the number of sheet discharge copies for each sheet discharge port

15 retrieved by said retrieving means and each sheet discharge address designated by said predetermined unit of printing data
with respect to each piece of the prepared page information.

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21. A computer readable storage medium storing a program for causing a data processing apparatus that can transmit a printing job to an image recording apparatus having a plurality of sheet discharge ports

25 or an image recording apparatus to which an optional device having a plurality of sheet discharge ports can be connected to execute the steps of:

instructing said image recording apparatus to register a discrimination name for each of said sheet discharge ports respectively;

requesting to obtain a discrimination name of each
5   sheet discharge port registered in said image recording apparatus from said image recording apparatus;

displaying the discrimination name obtained by said obtaining means, designating to select a plurality of sheet discharge addresses from the displayed
10   discrimination name respectively by a predetermined unit of printing data and, at the same time, designating the number of sheet discharge copies for each sheet discharge address designated by said predetermined unit of printing data; and

15   preparing a printing job by including each designation of the plurality of sheet discharge addresses by said predetermined unit of printing data by said designating means and each designation of the number of sheet discharge copies of each sheet
20   discharge address to be designated by said predetermined unit of printing data all in one printing job.

22.   A computer readable storage medium storing a
25   program for causing a data processing apparatus that can transmit printing data to an image recording apparatus having a plurality of sheet discharge ports

to execute the steps of:

requesting to obtain a discrimination name registered in each sheet discharge port of said image recording apparatus;

5   displaying the obtained discrimination name, designating to select a plurality of sheet discharge addresses from the displayed discrimination name respectively by a predetermined unit of printing data and, at the same time, designating the number of sheet

10   discharge copies for each sheet discharge address designated by said predetermined unit of printing data; and

preparing a printing job by including each designation of the plurality of sheet discharge

15   addresses by said predetermined unit of printing data and each designation of the number of sheet discharge copies of each sheet discharge address to be designated by said predetermined unit of printing data all in one printing job.

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23.   A computer readable storage medium storing a program for causing an image recording apparatus that can discharge a printing result of a printing job received from a data processing apparatus to a

25   plurality of sheet discharge ports to execute the steps of:

registering a discrimination name of each of said

sheet discharge ports that is instructed to be

registered by said data processing apparatus;

notifying said data processing apparatus of the

registered discrimination name of each of said sheet

5   discharge ports in accordance with a request from said

data processing apparatus;

preparing page information for a plurality of

discrimination names of a predetermined unit of

printing data included in one printing job by said

10   predetermined unit of printing data based on the

notification;

retrieving a sheet discharge port to which a

discrimination name identical with a plurality of

discrimination names of a predetermined unit of

15   printing data included in said one printing job is

registered; and

instructing the discharge of the number of sheet

discharge copies for each sheet discharge port

retrieved by said retrieving means and each sheet

20   discharge address designated by said predetermined unit

of printing data

with respect to each piece of the prepared page

information.

25   24.   A data processing apparatus that can transmit

a printing job to an image recording apparatus having a

plurality of storing units or an image recording

apparatus to which an optional apparatus having a plurality of storing units can be connected comprising;

first transmitting means for transmitting first data for requesting management information including

5   information indicating a discrimination name of each storing unit of said plurality of storing units managed by an external storage apparatus;

obtaining means for obtaining said management information from said external storage apparatus

10   outputted in response to the transmission of said first data;

display controlling means for causing to display a screen that is prepared based on said management information obtained by said obtaining means for

15   designating a distribution method of printing data to said plurality of storing units; and

second transmitting means for transmitting second data including an instruction to cause said image recording apparatus to operate to distribute printing

20   data to said plurality of storing units by a distribution method in accordance with an instruction from a user inputted via said screen.

25.   A data processing apparatus according to

25   Claim 24, wherein said display controlling means causes to display a screen that can designate a desired distribution method out of a plurality of distribution

method candidates, and said second transmitting means generates said second data including an instruction distinguishing said plurality of distribution methods each other and transmits the data to said image

5   recording apparatus.

26.   A data processing apparatus according to Claim 25, wherein said plurality of distribution methods include a first distribution method for

10   distributing printing data by one page unit to respective distribution object storing units and a second distribution method for distributing printing data by one file unit to respective distribution object storing units, and said second transmitting means

15   generates said second data including an instruction distinguishing said plurality of distribution method including said first distribution method and said second distribution method each other and transmits the data to said image recording apparatus.

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27.   A data processing apparatus according to Claim 24, wherein said second transmitting means transmits printing data including a plurality of files as one printing job together with said second data

25   collectively to said image recording apparatus.

28.   A data processing apparatus according to

Claim 27, wherein said plurality of files are files respectively prepared by different sorts of application software.

5   29.   A data processing apparatus according to Claim 27, wherein said plurality of distribution methods include a first distribution method for distributing printing data by one page unit to respective distribution object storing units, a second

10   distribution method for distributing printing data by one file unit to respective distribution object storing units, and a third distribution method for distributing printing data by one job unit consisting of printing data including a plurality of files to respective

15   distribution object storing units, and said second transmitting means generates said second data including an instruction distinguishing said plurality of distribution methods including said first, second and third distribution methods each other and transmits the

20   data to said image recording apparatus.

30.   A data processing apparatus according to Claim 24, wherein said second data includes data for specifying printing data to be distributed for each

25   distribution object storing unit.

31.   A data processing apparatus according to

Claim 30, wherein said image recording apparatus makes printing data to be distributed to each distribution object storing unit different based on said second data from said data processing apparatus.

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32. A controlling method of a system having a data processing apparatus that can transmit printing job to an image recording apparatus having a plurality of storing units or an image recording apparatus to

10 which an optional devices having a plurality of storing units can be connected comprising:

a first step for transmitting a first data for requesting management information including information indicating a discrimination name of each storing unit

15 of said plurality of storing units managed by a remote external storage apparatus;

a second step of obtaining said management information from said external storage apparatus outputted in response to the transmission of said first

20 data;

a third step of causing to display a screen to be generated based on said management information obtained by said second step for designating a distribution method of printing data to said plurality of storing

25 units; and

a fourth step of transmitting second data including an instruction to cause said image recording

apparatus to distribute printing data to said plurality of storing units by a distribution method in accordance with an instruction from a user inputted via said screen to said image recording apparatus.

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33. A computer readable storage medium storing a program for causing an data processing apparatus that can transmit a printing job to an image recording apparatus having a plurality of storing units or an image recording apparatus to which an optional apparatus having a plurality of storing units can be connected to execute the steps of:

a first step for transmitting a first data for requesting management information including information indicating a discrimination name of each storing unit of said plurality of storing units managed by a remote external storage apparatus;

a second step of obtaining said management information from said external storage apparatus outputted in response to said command data;

a third step of causing to display a screen to be generated based on said management information obtained by said second step for designating a distribution method of printing data to said plurality of storing units; and

a fourth step of transmitting second data including an instruction to cause said image recording

apparatus to distribute printing data to said plurality of storing units by a distribution method in accordance with an instruction from a user inputted via said screen to said image recording apparatus.

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34.   An image recording apparatus that can be connected to an optional apparatus having a plurality of storing units and can receive a printing job from a remote data processing apparatus, wherein said data

10   processing apparatus output a first data including an instruction to cause said image recording apparatus to distribute printing data to said plurality of storing units by a distribution method in accordance with an instruction from a user inputted based on management

15   information including information indicating a discrimination name of each storing unit of said plurality of storing units managed by the storage apparatus, and further comprising:

   receiving means for receiving said first data

20   outputted from said data processing apparatus; and

   controlling means for controlling to distribute the printing data received from said data processing apparatus corresponding to said first data to a storing unit based on said first data received by said

25   receiving means by a distribution method based on said first data.

35. An image recording apparatus according to Claim 34, further comprising:

receiving means for receiving second data for requesting said management information stored in said

5   storage apparatus to be outputted from said data processing apparatus; and

transmitting means for reading out said management information from said storage apparatus in response to the reception of said second data by said receiving

10   means and transmitting the information to said data processing apparatus having outputted said second data.

36. An image recording apparatus according to Claim 34, further comprising:

15   notifying means for notifying of a user outputting said printing data and a user corresponding to a distribution object storing unit that the distribution of said printing data to said storing unit has been finished in accordance with the end of the

20   distribution.

37. An image recording apparatus that can be connected to an optional apparatus having a plurality of storing units and can receive a printing job from a

25   remote data processing apparatus comprising:

receiving means for receiving first data including an instruction for designating a distribution method of

printing data to said plurality of storing units outputted from said data processing apparatus; and

controlling means for confirming the contents of said first data received by said receiving means and

5   causing to execute the distribution of printed data by a unit designated by a user of said data processing apparatus to respective distribution object storing units based on the contents of said first data.

10   38.   An image recording apparatus according to Claim 37, wherein said controlling means causes to execute the distribution of printing data by one page unit to respective distribution object storing units based on the contents of said first data.

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39.   An image recording apparatus according to Claim 38, wherein said controlling means causes to execute the distribution of printing data of different pages to each distribution object storing unit

20   respectively based on the contents of said first data.

40.   An image recording apparatus according to Claim 37, wherein said controlling means causes to distribute printing data by one file unit to each of

25   the distribution object storing units based on the contents of said first data.

41. An image recording apparatus according to Claim 40, wherein, if a plurality of files are included in printing data for one job to be received corresponding to said first data, said controlling means causes to execute the distribution of printing data of different files to each distribution object storing unit respectively based on the contents of said first data.

42. An image recording apparatus according to Claim 37, wherein, if a plurality of files are included in printing data for one job to be received corresponding to said first data, said controlling means causes to execute the distribution of printing data by one job unit to each distribution object storing unit based on the contents of said first data.

43. An image recording apparatus according to Claim 42, wherein said plurality of files are files prepared by different sorts of application software respectively.

44. An image recording apparatus according to Claim 37, wherein said controlling means causes to execute the distribution of printing data to distribution object storing units by distinguishing a plurality of distribution methods, including a first

distribution method for distributing printing data by one page unit to each distribution object storing unit and a second distribution method for distributing printing data by one file unit to each distribution

5   object storing unit, each other based on said first data.

45.   An image recording apparatus according to Claim 37, wherein said controlling means causes to

10   execute the distribution of printing data to distribution object storing units by distinguishing a plurality of distribution methods, including a first distribution method for distributing printing data by one page unit to each distribution object storing unit,

15   a second distribution method for distributing printing data by one file unit to each distribution object storing unit and a third distribution method for distributing printing data for one job including a plurality of files by one job unit, each other based on

20   said first data.

46.   An image recording apparatus according to Claim 37, wherein said instruction included in said first data is based on management information including

25   information indicating a discrimination name for each storing unit of said plurality of storing units, further comprising:

storing means for storing said management
information;

receiving means for receiving a second data for
requesting said management information outputted from
5   said data processing apparatus; and

transmitting means for transmitting said
management information to said data processing
apparatus outputting said second data in response to
the reception of said second data by said receiving
10   means.

47.   An image recording apparatus according to
Claim 37, further comprising notifying means for
notifying a user outputting said printing data and a
15   user corresponding to a distribution object storing
unit that the distribution of said printing data to
said storing unit has been finished in accordance with
the end of the distribution.

20   48.   A controlling method of an image recording
apparatus that can be connected to an optional
apparatus having a plurality of storing units and can
receive a printing job from a remote data processing
apparatus, wherein said data processing apparatus
25   outputs a first data including an instruction to cause
said image recording apparatus to distribute printing
data to said plurality of storing units by a

distribution method in accordance with an instruction
from a user inputted based on management information
including information indicating a discrimination name
of each storing unit of said plurality of storing units
5   managed by the recording apparatus, comprising the
steps of:

     receiving said first data outputted from said data
processing apparatus; and

     controlling to distribute the printing data
10   received from said data processing apparatus in
correspondence with said first data to a storing unit
based on said first data received by said receiving
means by a distribution method based on said first
data.

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     49.   A computer readable storage medium storing a
program for causing an image recording apparatus to
execute the following steps, which can be connected to
an optional apparatus having a plurality of storing
20   units and can receive a printing job from a remote data
processing apparatus, wherein said data processing
apparatus outputs a first data including an instruction
to cause said image recording apparatus to distribute
printing data to said plurality of storing units by a
25   distribution method in accordance with an instruction
from a user inputted based on management information
including information indicating a discrimination name

of each storing unit of said plurality of storing units
managed by the recording apparatus, comprising the
steps of:

receiving said first data outputted from said data
5   processing apparatus; and

controlling to distribute the printing data
received from said data processing apparatus in
correspondence with said first data to a storing unit
based on said first data received by said receiving
10   means by a distribution method based on said first
data.

50. A controlling method of an image recording
apparatus that can be connected to an optional
15   apparatus having a plurality of storing units and can
receive a printing job from a remote data processing
apparatus, comprising the steps of:

receiving a first data including an instruction
for designating a distribution method of printing data
20   to said plurality of storing units outputted from said
data processing apparatus; and

confirming the contents of said received first
data executing the distribution of printing data by a
unit designated by a user of said data processing
25   apparatus to each distribution object storing unit
based on the contents of said first data.

51.   A computer readable storage medium storing a
program for causing an image recording apparatus to
execute the following steps, which can be connected to
an optional apparatus having a plurality of storing

5   units and can receive a printing job from a remote data
processing apparatus comprising the steps of:

receiving a first data including an instruction
for designating a distribution method of printing data
to said plurality of storing units outputted from said

10   data processing apparatus; and

confirming the contents of said received first
data executing the distribution of printing data by a
unit designated by a user of said data processing
apparatus to each distribution object storing unit

15   based on the contents of said first data.